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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,608	05/18/2004	Chia-Chun Lin	12191-US-PA	3607
31561 7590 06/08/2007 JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE 7 FLOOR-1, NO. 100 ROOSEVELT ROAD, SECTION 2 TAIPEI, 100 TAIWAN			EXAMINER HAILU, KIBROM T	
			ART UNIT 2616	PAPER NUMBER
			NOTIFICATION DATE 06/08/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USA@JCIPGROUP.COM.TW

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/709,608		LIN, CHIA-CHUN	
	<b>Examiner</b>		<b>Art Unit</b>	
	Kibrom T. Hailu		2616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-2, 5, 8 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitations “said data segment”, “said transmission system” and “said data transmission channels” in lines 2, 3 and 4, respectively. There are insufficient antecedent basis for these limitations in the claim. Appropriate correction is required.

Claims 1 and 5 recite the limitation “said data block” in line 3. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claims 2 and 5 recite the limitation “said transmission end” in lines 3 and 2, respectively. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim 8 recites the limitation “said statuses” in lines 2 and 5. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim 14 recites the limitation “said receiving end” in line 3. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6, 8-10, 13, and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Cha (US Pub. 2002/0018452 A1).

**Regarding claim 1**, Cha discloses said data segments being received and assembled to said data block at a receiving end of said transmission system through said data transmission channels (Fig. 3; paragraphs [0019], lines 10-17; [0020], lines 8-12; [0040]; [0044]; claim 1, lines 12-20; claim 5, lines 10-14).

**Regarding claim 2**, Cha further discloses a size and a quantity of said data segments being determined upon communication between said transmitting end and said receiving end through said data transmission channels (Fig. 9, 10 and 11; paragraph [0021]; [0019], lines 3-5; [0020], lines 4-6; [0039], lines 1-6; [0076]-[0080], illustrate the file structure portion of each of the files or data segments comprises the size and quantity of each of the data segments and transmit them in the available channels).

**Regarding claim 3**, Cha further discloses comprising statuses of said data transmission channels and said data segments being maintained by said transmitting end of said transmission system, and one of said data transmission channels being determined to transmit said data segments based on statuses of said data transmission channels and statuses of said data segments (paragraph [0043], lines 1-3; [0039], lines 1-3; [0020], lines 4-6; [0019], lines 3-5; explain the file divider divides the block of data, such as file A, into a number of available channels. That is, the data block is divided into data segments depending on the available channels. Thus, the transmission of the data doesn't stop because of the unavailability of one or more of the

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channels. The divider segments the data block according to the availability or status of the channel).

**Regarding claim 4**, Cha further discloses comprising said data segment that is under transmission being simultaneously transmitted via at least one of said data transmitting channels that is idling when none of said data segments being to-be-transmitted (Fig. 3, 10 and 11, illustrate the simultaneous transmission).

**Regarding claim 5**, Cha discloses said data segments are numbered by said transmitting end (Fig. 9; paragraph [0082]-[0085]) and are assembled to said data block thereby said receiving end (Fig. 10 and 11; paragraph [0044], lines 4-7, illustrates the File Synthesizer 19 synthesizes recombines the data segments or the files that are divided at the transmitter 10 into the original data block or File A).

**Regarding claim 6**, Cha discloses a system for transmitting data through a multi-path bus (CH 1-CH N) in a transmission system (see Fig. 3; paragraph [0019], lines 1-3), comprising a plurality of transmitting end transceivers (Fig. 3, Data Transmitters 1-1N); a plurality of receiving end transceivers (Data Receivers 1-1N), coupling to said plurality of transmitting end transceivers via a plurality of data transmission channels (CH 1-CH N) (see Fig. 3; paragraph [0038]-[0040]); a transmitting end arbiter (File Divider 11), coupling to said transmitting end transceivers for dividing a data block into a plurality of data segments for transmission through said data transmission channels (Fig. 9; paragraph [0019], lines 3-5; [0020], lines 4-6; [0039], lines 4-6); and a receiving end arbiter (File Synthesizer 19), coupling to said receiving end transceivers for receiving said data segments through said data transmission channels and assembling said data segments to said data block (Fig. 10 and 11; paragraph [0044], lines 4-7,

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illustrates the File Synthesizer 19 synthesizes recombines the data segments or the files that are divided at the transmitter 10 into the original data block or File A).

**Regarding claim 8**, which inherits the limitation of claim 6, the claimed system including the features corresponding to subject matter mentioned above in the rejection claim 3 is applicable hereto.

**Regarding claim 9**, which inherits the limitation of claim 8, the claimed system including the features corresponding to subject matter mentioned above in the rejection claims 3 and 4 is applicable hereto.

**Regarding claim 10**, which inherits the limitation of claim 6, the claimed system including the features corresponding to subject matter mentioned above in the rejection claim 5 is applicable hereto.

**Regarding claim 13**, Cha discloses a transmitting end (10) for a multi-path bus (CH 1-CH N) data transmission (Fig. 3), comprising: a plurality of transmitting end transceivers (Fig. 3, Data Transmitters 1-1N), providing a plurality of data transmission channels (CH 1-CH N) (see Fig. 3; and a transmitting end arbiter (File Divider 11), coupling to said plurality of transmitting end transceivers, for dividing a data block into a plurality of data segments for transmission through said data transmission channels (Fig. 10 and 11; paragraph [0044], lines 4-7, illustrates the File Synthesizer 19 synthesizes recombines the data segments or the files that are divided at the transmitter 10 into the original data block or File A).

**Regarding claim 15**, which inherits the limitation of claim 13, the claimed system including the features corresponding to subject matter mentioned above in the rejection claim 3 is applicable hereto.

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**Regarding claim 16**, which inherits the limitation of claim 13, the claimed system including the features corresponding to subject matter mentioned above in the rejection claims 3 and 4 is applicable hereto.

**Regarding claim 17**, Cha discloses a receiving end (20) for receiving a data block having a plurality of data segments (see Fig. 10 and 11, Files or data segments B to E of File or data block A) through a plurality of data transmission channels (Fig. 3, 10 and 11, CH 1-CH N), comprising: a plurality of receiving end transceivers (Data Receivers 1-1N), providing said data transmission channels (CH 1-CH N) (Fig. 3, 10 and 11); and a receiving end arbiter (File Divider 11), coupling to said receiving end transceivers, for receiving said data segments through said data transmission channels and assembling said data segments to said data block (Fig. 10 and 11; paragraph [0044], lines 4-7, illustrates the File Synthesizer 19 synthesizes recombines the data segments or the files that are divided at the transmitter 10 into the original data block or File A).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.



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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. Claims 7, 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cha in view of Brown et al. (US Pub. 2003/0103515 A1).

**Regarding claim 7**, Cha discloses a size and a quantity of said data segments are determined upon communication between transmitting end arbitor and said receiving end arbitor through one of said data transmission channels upon or during transmission said data block is transmitted (Fig. 9, 10 and 11; paragraph [0021]; [0019], lines 3-5; [0020], lines 4-6; [0039], lines 1-6; [0076]-[0080], illustrate the file structure portion of each of the files or data segments comprises the size and quantity of each of the data segments and transmit them in the available channels).

Cha doesn't disclose the size and quantity of the data segments is determined before transmission.

Brown teaches determining the size and quantity of the data segments by negotiating between a transmitter and receiver before the generation process of the segments is performed by the processor 110 for transmission (paragraph [0040]).

Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to determine the size and quantity of the data segments as taught by Brown and use that into the multi-channel communication system of Cha so that time-sensitive information is transmitted smoothly, without change to existing data protocols. This also reduces time delay.

**Regarding claim 14**, which inherits the limitation of claim 13, the claimed system including the features corresponding to subject matter mentioned above in the rejection claim 7 is applicable hereto.



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**Regarding claim 18**, which inherits the limitation of claim 17, the claimed system including the features corresponding to subject matter mentioned above in the rejection claim 7 is applicable hereto. It is clear that negotiation between the transmitter and the receiver for the size and quantity of the data segments before transmission, even before their process of generation by the processor, is just process of requesting and responding. It is also clear and obvious that the agreed result of negotiation for the size and quantity of the data segments is valid.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cha in view of Cox et al. (US 7,187,863 B2).

**Regarding claim 11**, as applied above, Cha discloses data transmission channels. However, Cha doesn't disclose the data transmission channels are optical fiber channels.

Cox teaches the data transmission channels are optical fiber channels (Fig. 1 and 2; col. 4, lines 31-38, 54-59; col. 8, lines 26-32, 38-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use plurality of fiber optical channels taught by Cox into the multi-channel communication system of Cha so that the multiple data substreams would be transmitted through the plurality of the fiber optical channels in higher speed.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cha in view of Martin et al. (US 6,021,129).

**Regarding claim 12**, as applied above, Cha discloses data transmission channels. However, Cha doesn't disclose the data transmission channels are universal serial bus channels.

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Martin teaches the data transmission channels are universal serial bus channels (col. 6, lines 53-61; col. 7, line 63-col. 8, line 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Martin's various universal serial bus (USB) channels into the multi-channel communication system of Cha in order to avoid latency.

### *Conclusion*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kibrom T. Hailu whose telephone number is (571)270-1209. The examiner can normally be reached on Monday-Thursday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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